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ABSTRACT

A total of 48 Canadian, middle-class 3-year-olds participated in a study of their abilities to predict the actions of a story character with a false belief and a story character engaged in pretence. In the experimental situation, a red puppet with pen-markers for legs left an "inky trail" to the location of a hidden treasure in one of three cups that were placed upside down on an erasable surface. Tracks were erased, false tracks were made to an empty cup, and a duck searched for the treasure. Subjects predicted the duck's actions under two conditions. Half the subjects were told that the duck did not know that the tracks were false and did not lead to the treasure; half were told that the duck knew that false tracks were to be made and where the treasure was hidden, but the duck had agreed to pretend that the treasure was at the end of the false tracks. Two questions were asked: (1) Where will the duck look for the treasure? (2) Where will the duck think the treasure is? Findings indicated that 3-year-olds were able to predict the actions and thoughts of a character who was pretending that inky tracks lead to the treasure, but were not able to predict the thoughts and actions of a character who falsely believed the tracks led to the treasure. Findings support the claim that there are two representational watersheds: first, an understanding of pretend play, and, later, the ascription of a false belief. (RH)

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PRETENCE AND DECEPTION: ONE COGNITIVE WATERSHED OR TWO?

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Abstract

In this study 3-year-olds were able to predict the actions and thoughts of a character who was *pretending* that inky tracks lead to the treasure (when the treasure was really hidden elsewhere) but were not able to predict the thoughts and actions of a character who *falsely believed* that the tracks lead to the treasure. These findings support the claim that there are two representational watersheds: Prior to 3 years the ability to understand that someone may represent X as Y. This is pretence. And after 3 years the understanding that someone may unknowingly *misrepresent* X as Y. This is deception.

Introduction

There is little dispute that the ascription of beliefs constitutes a watershed in evolutionary development. The question is whether there is one representational watershed at two years, resulting in both an ability to understand pretence and false belief, or whether false belief comprehension, and the concomitant understanding of deception, must await a second watershed two years later.

Previous studies have been unable to experimentally discriminate the cognitive phenomena of pretence and false belief. We know that children engage in pretend play by age 2, yet at 3 they still failed to ascribe pretend actions in these studies. This invites criticism that children's difficulty in both pretend and false belief tasks may be merely one of ascription in general, providing support for the view that there is only one watershed.

The aim is to show that while 3-year-olds cannot yet predict the actions of a character with a false belief, they can well predict the actions of a story character engaged in pretence.

Method

The materials consisted of a brightly coloured sticker, the "treasure", hidden in one of three cups placed upside-down on a plastic "wipe-off" cloth; "Red Puppet", the hider whose legs are pen-markers so that she leaves behind inky tracks when she hides the treasure under a cup; and a puppet, "Duck", the searcher, who must look for the treasure.

Subjects were 48 Canadian middle class 3-year-olds, (range 3;1 to 3;11, mean 3;8).

In Phase 1, Red Puppet hid the treasure and the subject took the role of the searcher. The aim of this preliminary phase was to ensure that each subject had a clear understanding that the inky tracks were the clue to where the treasure was hidden.

In Phase 2, Duck played the role of the searcher, and the subjects predicted his actions. Red puppet hid the treasure, but the tracks were then erased and false tracks made to an empty cup. Half the subjects were given a deception version in which Duck did not know that the tracks were really false and did not lead to the treasure. The other half (counterbalanced) were given a pretend version in which Duck is told that false tracks are to be made, and told where the treasure will be really hidden, but agrees to "pretend" that the treasure is at the end of the false tracks.

Two test questions were asked, in counterbalanced order, one each on two separate trials:

1) Where will Duck *look* for the sticker? 2) Where will Duck *think* the sticker is?

Results

1. In response to the look question, on the *deception* condition, only 8 (33%) of the subjects correctly predicted that the searcher would look for the treasure in the empty cup at the end of the false tracks. See figure 1. However on the *pretence* condition, 18 (75%) of the subjects correctly predicted that the searcher would look for the treasure at the end of the false tracks (Chi-square = 8.39, d.f. = 1, $p < .01$).

2. In response to the think question, only 7 (29%) of the subjects understood that when Duck was *deceived* as to the location of the treasure, he would think it to be at the end of the false tracks. But on the condition in which Duck agreed to "*pretend*" that the treasure was at the end of the false tracks, 15 (62%) of the subjects responded appropriately that Duck would think the treasure was in the correct location (Chi-square = 5.37, d.f. = 1, $p < .05$).

3. As one would expect, on the deception condition there was no differentiation between predictions as to where Duck would *look* for the treasure or *think* it to be. However in the

pretend condition, of the 18 Subjects who correctly predicted that Duck would look for the treasure *at the end of the false tracks* 12 (67%) appropriately predicted that at the same time Duck would think it was in the *correct location*.

Conclusions

Children of 3 years proved able to attribute a pretend action but failed to attribute a false belief.

The point of pretence is that one acts according to X while at the same time thinking/knowing that the situation is really Y. In the pretend condition, the subjects appropriately predicted that the searcher would *think* it was in the correct location but *look* for it at the end of the false tracks.

This differentiation between another persons *knowledge* of the real situation and the person's *action* within the pretend scenario clearly demonstrates that by 3 years, children are well able to attribute pretend actions to others.

It is worth noting that in the pretend condition the searcher was privy to the information as to where the treasure was really hidden, yet the 3-year-olds predicted that he would look under an empty cup. In the false belief condition, on the other hand, it was emphasized that the searcher "did not know" where the treasure was hidden, yet the 3-year-olds persisted in predicting that he would search in the correct location.

The results of this study support the notion of two watersheds: first, an understanding of pretend play, and only later, the ascription of a false belief. In pretence, children of 2 and 3 years understand that someone may represent X as Y, but, as distinct from deception, all participants attach the same reality status to the pretend statement. It is only at the second watershed that the child grasps conflicting truth values. A representation may be a true or false reflection of a real state of affairs. A participant may unknowingly *misrepresent* X as Y. This is deception.

Figure 1.
Proportion of subjects who correctly predicted the actions and thoughts of someone being deceived versus someone engaging in pretence.

